

IN THE CLAIMS:

1. (currently amended) A method for managing resources in a multimedia system, the method comprises:

receiving a client request for a multimedia system service from one of a plurality of clients, wherein the multimedia system service includes access to a channel of a plurality of dissimilar channels having dissimilar resource demands;

determining whether the client request is valid for the one of the plurality of clients based upon client authenticity and client privileges;

when the client request is valid for the one of the plurality of clients, determining whether the multimedia system has sufficient resources of a plurality of resources to fulfill the client request; and

allocating at least some of the sufficient resources to fulfill the client request based on a multimedia system resource allocation procedure that are determined based on a priority associated with the multimedia system service and further based on a predetermined assignment of assigned resources to a particular one of the plurality of clients.

2. (previously presented) The method of claim 1, wherein, when the client request is to view a video program, the determining whether the client request is valid further comprises:

determining whether access to the video program is restricted for the one of the plurality of clients;

when the video program is not restricted for the one of the plurality of clients, validating the client request; and

when the video program is restricted for the one of the plurality of clients, denying the client request.

3. (original) The method of claim 2, wherein the determining whether the access to the video program is restricted further comprises at least one of:
 determining whether the video program exceeds a parental control setting for the one of the plurality of clients;
 determining whether the one of the plurality of clients has rental privileges to access the video program; and
 determining whether the one of the plurality of clients has exceeded an allotted daily viewing quota.

4. (original) The method of claim 1, wherein the determining whether the client request is valid further comprises:
 determining whether the client request is received during an assigned access time period for the one of the plurality of clients;
 when the client request is received during the assigned access time period, validating the client request; and
 when the client request is not received during the assigned access time period, denying the client request.

5. (original) The method of claim 1, wherein the determining whether the multimedia system has the sufficient resources further comprises at least one of:
 determining whether a tuning module has capacity to accommodate the client request;
 determining whether a channel mixer has sufficient processing resources to process the client request; and
 determining whether a communication path between a multimedia server and the plurality of clients has sufficient bandwidth to accommodate the client request.

1 6. (original) The method of claim 1 further comprises:
2 when the multimedia system does not have the sufficient resources to fulfill the client
3 request, determining whether an alternate multimedia service is available by at least one of:
4 for a video program, adjusting resolution to a default resolution for the multimedia
5 system;
6 for a video program, adjusting video quality to a default video quality for the multimedia
7 system;
8 querying the one of the plurality of clients to select the alternative multimedia service;
9 and
10 automatically selecting the alternate multimedia service based a pre-programmed
11 alternative selection.

1 7. (previously presented) The method of claim 1 further comprises:
2 when the multimedia system does not have the sufficient resources to fulfill the client
3 request, determining whether the client request has priority over a currently serviced client
4 request based on the priority of the multimedia system service and a priority of the service
5 associated with the currently serviced client request; and
6 when the client request has priority over the currently serviced client request, preempting
7 the currently serviced client request to obtain the sufficient resources.

1 8. (original) The method of claim 1 further comprises:
2 when the multimedia system does not have the sufficient resources to fulfill the client
3 request, determining whether allocation of the plurality of resources can be reallocated to fulfill
4 the client request; and
5 when the plurality of resources can be reallocated to fulfill the client request, adjusting
6 allocation of the plurality of resources to fulfill the client request.

1 9. (original) The method of claim 8, wherein the determining whether allocation of the
2 plurality of resources can be reallocated to fulfill the client request further comprises:
3 monitoring use of the plurality of resources in comparison to capabilities of the plurality
4 of resources;
5 when the use of at least some of the plurality of resources is not optimal, adjusting the
6 allocation of the plurality of resources.

1 10. (currently amended) The method of claim 1, wherein the allocating the at least some of
2 the sufficient resources to fulfill the client request further comprises at least one of:
3 allocating the at least some of the sufficient resources in a first-come-first serve manner;
4 and
5 allocating the at least some of the sufficient resources in a trunked manner; ~~and~~
6 ~~allocating the at least some of the sufficient resources based on a predetermined~~
7 ~~assignment of resources to a particular one of the plurality of clients.~~

1 11. (original) The method of claim 1 further comprises:
2 determining whether the multimedia system has excess available resources;
3 when the multimedia system has excess available resources, determining whether the one
4 of the plurality of clients has enhanced feature privileges; and
5 when the one of the plurality of clients has enhanced feature privileges, allocating further
6 resources of the plurality of resources to support enhanced features for the one of the plurality of
7 clients.

1 12. (currently amended) A method for managing resources in a multimedia system, the
2 method comprises:
3 receiving a client request for a multimedia service from one of a plurality of clients, the
4 multimedia service having a service type, wherein the multimedia system service includes access
5 to at least one of a radio station channel, a television station channel, a satellite channel, a cable
6 channel, Internet access, and intercom communication;
7 determining whether the client request is valid for the one of the plurality of clients based
8 upon client authenticity and client privileges;
9 when the client request is valid for the one of the plurality of clients, determining whether
10 the multimedia system has sufficient resources of a plurality of resources to fulfill the client
11 request; and
12 allocating ~~best-match~~ resources of the sufficient resources to fulfill the client request that
13 are determined based on a priority associated with the multimedia service and further based on a
14 predetermined assignment of assigned resources to a particular one of the plurality of clients.

1 13. (previously presented) The method of claim 12, wherein, when the client request is to
2 view a video program, the determining whether the client request is valid further comprises:
3 determining whether access to the video program is restricted for the one of the plurality
4 of clients;
5 when the video program is not restricted for the one of the plurality of clients, validating
6 the client request; and
7 when the video program is restricted for the one of the plurality of clients, denying the
8 client request.

1 14. (original) The method of claim 12, wherein the determining whether the client request is
2 valid further comprises:
3 determining whether the client request is received during an assigned access time period
4 for the one of the plurality of clients;
5 when the client request is received during the assigned access time period, validating the
6 client request; and

7 when the client request is not received during the assigned access time period, denying
8 the client request.

1 15. (original) The method of claim 12, wherein the determining whether the multimedia
2 system has the sufficient resources further comprises at least one of:
3 determining whether a tuning module has capacity to accommodate the client request;
4 determining whether a channel mixer has sufficient processing resources to process the
5 client request; and
6 determining whether a communication path between a multimedia server and the
7 plurality of clients has sufficient bandwidth to accommodate the client request.

1 16. (previously presented) The method of claim 12 further comprises:
2 when the multimedia system does not have the sufficient resources to fulfill the client
3 request, determining whether the client request has priority over a currently serviced client
4 request based on the priority of the multimedia service and a priority of the service associated
5 with the currently serviced client request; and
6 when the client request has priority over the currently serviced client request, preempting
7 the currently serviced client request to obtain the sufficient resources.

1 17. (currently amended) The method of claim 12, wherein the allocating the ~~best match~~
2 resources of the sufficient resources to fulfill the client request further comprises:
3 maintaining a listing of resource capabilities for each of the plurality of resources;
4 determining type of resource needed to support the client request; and
5 performing a best match analysis to identify the best match resources based on the
6 resource capabilities of the best match resources and the type of resource needed.

1 18. (original) The method of claim 12 further comprises:
2 determining whether the multimedia system has excess available resources;
3 when the multimedia system has excess available resources, determining whether the one
4 of the plurality of clients has enhanced feature privileges; and
5 when the one of the plurality of clients has enhanced feature privileges, allocating further
6 resources of the plurality of resources to support enhanced features for the one of the plurality of
7 clients.

1 19. (currently amended) An apparatus for managing resources in a multimedia system, the
2 apparatus comprises:

3 processing module; and
4 memory operably coupled to the processing module, wherein the memory includes
5 operational instructions that cause the processing module to:

6 receive a client request for a multimedia system service from one of a plurality of
7 clients, wherein the multimedia system service includes access to at least one of a radio
8 station channel, a television station channel, a satellite channel, a cable channel, Internet
9 access, and intercom communication;

10 determine whether the client request is valid for the one of the plurality of clients,
11 based on control limits set by a user of the multimedia system and client authenticity;

12 when the client request is valid for the one of the plurality of clients, determine
13 whether the multimedia system has sufficient resources of a plurality of resources to
14 fulfill the client request; and

15 when the multimedia system has the sufficient resources to fulfill the client
16 request, allocate at least some of the sufficient resources to fulfill the client request based
17 on a multimedia system resource allocation procedure that considers a priority associated
18 with the multimedia service and further based on a predetermined assignment of assigned
19 resources to a particular one of the plurality of clients.

1 20. (previously presented) The apparatus of claim 19, wherein, when the client request is to
2 view a video program, the memory further comprises operational instructions that cause the
3 processing module to determine whether the client request is valid by:

4 determining whether access to the video program is restricted for the one of the plurality
5 of clients;

6 when the video program is not restricted for the one of the plurality of clients, validating
7 the client request; and

8 when the video program is restricted for the one of the plurality of clients, denying the
9 client request.

21. (original) The apparatus of claim 20, wherein the memory further comprises operational instructions that cause the processing module to determine whether the access to the video program is restricted by at least one of:

determining whether the video program exceeds a parental control setting for the one of the plurality of clients;

determining whether the one of the plurality of clients has rental privileges to access the video program; and

determining whether the one of the plurality of clients has exceeded an allotted daily viewing quota.

22. (original) The apparatus of claim 19, wherein the memory further comprises operational instructions that cause the processing module to determine whether the client request is valid by:

determining whether the client request is received during an assigned access time period for the one of the plurality of clients;

when the client request is received during the assigned access time period, validating the client request; and

when the client request is not received during the assigned access time period, denying the client request.

23. (original) The apparatus of claim 19, wherein the memory further comprises operational instructions that cause the processing module to determine whether the multimedia system has the sufficient resources by at least one of:

determining whether a tuning module has capacity to accommodate the client request;

determining whether a channel mixer has sufficient processing resources to process the client request; and

determining whether a communication path between a multimedia server and the plurality of clients has sufficient bandwidth to accommodate the client request.

1 24. (original) The apparatus of claim 19, wherein the memory further comprises operational
2 instructions that cause the processing module to:
3 when the multimedia system does not have the sufficient resources to fulfill the client
4 request, determine whether an alternate multimedia service is available by at least one of:
5 for a video program, adjusting resolution to a default resolution for the multimedia
6 system;
7 for a video program, adjusting video quality to a default video quality for the multimedia
8 system;
9 querying the one of the plurality of clients to select the alternative multimedia service;
10 and
11 automatically selecting the alternate multimedia service based a pre-programmed
12 alternative selection.

1 25. (previously presented) The apparatus of claim 19, wherein the memory further comprises
2 operational instructions that cause the processing module to:
3 when the multimedia system does not have the sufficient resources to fulfill the client
4 request, determine whether the client request has priority over a currently serviced client request
5 based on the priority of the multimedia service and a priority of the service associated with the
6 currently serviced client request; and
7 when the client request has priority over the currently serviced client request, preempt the
8 currently serviced client request to obtain the sufficient resources.

1 26. (original) The apparatus of claim 19, wherein the memory further comprises operational
2 instructions that cause the processing module to:
3 when the multimedia system does not have the sufficient resources to fulfill the client
4 request, determine whether allocation of the plurality of resources can be reallocated to fulfill the
5 client request; and
6 when the plurality of resources can be reallocated to fulfill the client request, adjust
7 allocation of the plurality of resources to fulfill the client request.

1 27. (original) The apparatus of claim 26, wherein the memory further comprises operational
2 instructions that cause the processing module to determine whether allocation of the plurality of
3 resources can be reallocated to fulfill the client request by:

4 monitoring use of the plurality of resources in comparison to capabilities of the plurality
5 of resources;

6 when the use of at least some of the plurality of resources is not optimal, adjusting the
7 allocation of the plurality of resources.

1 28. (currently amended) The apparatus of claim 19, wherein the memory further comprises
2 operational instructions that cause the processing module to allocate the at least some of the
3 sufficient resources to fulfill the client request by at least one of:

4 allocating the at least some of the sufficient resources in a first-come-first serve manner;
5 and

6 allocating the at least some of the sufficient resources in a trunked manner; ~~and~~
7 ~~allocating the at least some of the sufficient resources based on a predetermined~~
8 ~~assignment of resources to a particular one of the plurality of clients.~~

1 29. (original) The apparatus of claim 19, wherein the memory further comprises operational
2 instructions that cause the processing module to:

3 determine whether the multimedia system has excess available resources;

4 when the multimedia system has excess available resources, determine whether the one
5 of the plurality of clients has enhanced feature privileges; and

6 when the one of the plurality of clients has enhanced feature privileges, allocate further
7 resources of the plurality of resources to support enhanced features for the one of the plurality of
8 clients.

1 30. (currently amended) An apparatus for managing resources in a multimedia system, the
2 apparatus comprises:
3 processing module; and
4 memory operably coupled to the processing module, wherein the memory includes
5 operational instructions that cause the processing module to:
6 receive a client request for a multimedia service from one of a plurality of clients,
7 the multimedia service having one of a plurality of service types and provides access to at
8 least one of a radio station channel, a television station channel, a satellite channel, a
9 cable channel, Internet access, and intercom communication;
10 determine whether the client request is valid for the one of the plurality of clients
11 based upon client authenticity and client privileges;
12 when the client request is valid for the one of the plurality of clients, determine
13 whether the multimedia system has sufficient resources of a plurality of resources to
14 fulfill the client request; and
15 when the multimedia system has the sufficient resources to fulfill the client
16 request, allocate best match resources of the sufficient resources to fulfill the client
17 request that are determined based on a priority associated with the multimedia service
18 and further based on a predetermined assignment of assigned resources to a particular one
19 of the plurality of clients.

1 31. (previously presented) The apparatus of claim 30, wherein, when the client request is to
2 view a video program, the memory further comprises operational instructions that cause the
3 processing module to determine whether the client request is valid by:
4 determining whether access to the video program is restricted for the one of the plurality
5 of clients;
6 when the video program is not restricted for the one of the plurality of clients, validating
7 the client request; and
8 when the video program is restricted for the one of the plurality of clients, denying the
9 client request.

1 32. (original) The apparatus of claim 30, wherein the memory further comprises operational
2 instructions that cause the processing module to determine whether the client request is valid by:
3 determining whether the client request is received during an assigned access time period
4 for the one of the plurality of clients;
5 when the client request is received during the assigned access time period, validating the
6 client request; and
7 when the client request is not received during the assigned access time period, denying
8 the client request.

1 33. (original) The apparatus of claim 30, wherein the memory further comprises operational
2 instructions that cause the processing module to determine whether the multimedia system has
3 the sufficient resources by at least one of:
4 determining whether a tuning module has capacity to accommodate the client request;
5 determining whether a channel mixer has sufficient processing resources to process the
6 client request; and
7 determining whether a communication path between a multimedia server and the
8 plurality of clients has sufficient bandwidth to accommodate the client request.

1 34. (previously presented) The apparatus of claim 30, wherein the memory further comprises
2 operational instructions that cause the processing module to:
3 when the multimedia system does not have the sufficient resources to fulfill the client
4 request, determine whether the client request has priority over a currently serviced client request
5 based on the priority of the multimedia service and a priority of the service associated with the
6 currently serviced client request; and
7 when the client request has priority over the currently serviced client request, preempt the
8 currently serviced client request to obtain the sufficient resources.

1 35. (original) The apparatus of claim 30, wherein the memory further comprises operational
2 instructions that cause the processing module to allocate the best match resources of the
3 sufficient resources to fulfill the client request by:

4 maintaining a listing of resource capabilities for each of the plurality of resources;
5 determining type of resource needed to support the client request; and
6 performing a best match analysis to identify the best match resources based on the
7 resource capabilities of the best match resources and the type of resource needed.

1 36. (original) The apparatus of claim 30, wherein the memory further comprises operational
2 instructions that cause the processing module to:

3 determine whether the multimedia system has excess available resources;
4 when the multimedia system has excess available resources, determine whether the one
5 of the plurality of clients has enhanced feature privileges; and
6 when the one of the plurality of clients has enhanced feature privileges, allocate further
7 resources of the plurality of resources to support enhanced features for the one of the plurality of
8 clients.

1 37. (previously presented) The method of claim 1 further comprising:
2 when the multimedia system has insufficient resources to fulfill the client request,
3 determining when the priority associated with the multimedia system service is higher than the
4 priority of an ongoing multimedia service; and
5 obtaining resources associated with the ongoing multimedia service to fulfill the client
6 request when the priority associated with the multimedia system service is higher than the
7 priority of an ongoing multimedia service.

1 38. (previously presented) The method of claim 1 wherein the multimedia service has one of
2 a plurality of service types and wherein the multimedia system resource allocation procedure
3 operates based on the one of a plurality of service types.